

CLAIMS

1. A centrifuge comprising a rotatingly mounted bowl (1) and, concentrically rotatingly mounted therein, a scroll (5) rotating at a differential speed the bowl (1) and the scroll (5) being powered by a central exterior (stationary located) motor assembly (4; 22), a hydraulic motor (12; 21) – provided as the gearbox controllably defining said differential speed – being interposed therebetween with its casing (12b), on the one hand and its rotor (12c), on the other, the feed of the hydraulic motor (12, 21) being provided by a hydraulic pump (feed pump 11; 23; 41)
- characterized in that**
- assigned to said hydraulic motor (12; 21) corotatingly is said hydraulic feed pump (11; 23; 41) whose rotor (13) is supported non-corotating exterior to said rotating centrifuge parts (supporting lever 15) and in that the change in the flow supplied by said feed pump (11, 23, 41) to said hydraulic motor (12, 21) is brought about by adjusting members (42; 43; 29, 30) actuated hydraulically and arranged to corotate with said drive.
2. The centrifuge as set forth in claim 1, wherein the feed pump (41) has a constant displacement volume,
- characterized in that**
- said adjusting member is a flow control valve (42, 43) which returns the feed flow not required by said hydraulic motor (12; 21) to the non-pressurized area of said flow circuit, said flow controller setting either the flow branched off from the working circuit (2-way flow control) or directly regulating the flow delivered to said hydraulic motor (12, 21) (3-way flow control).
3. The centrifuge as set forth in claim 2,
- characterized in that**

a control aperture (40) of said flow controller (42, 43) through which said regulated flow flows can be located on both the rotating system and on the non-rotating system.

- 5 4. The centrifuge as set forth in claim 2,
characterized in that
a control aperture (37) through which said regulated flow flows is controlled by application of the return pressure (valve 46) or activated by a proportional magnet or solenoid (36).
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5. The centrifuge as set forth in claim 1, wherein the feed pump (23) has a variable displacement volume,
characterized in that
said adjusting member is a hydraulically actuated cylinder (29) which
15 is activated via a valve (servo member 31).
6. The centrifuge as set forth in claim 5,
characterized in that
said servo member (31) is activated directly via a proportional magnet
20 or solenoid (36).
7. The centrifuge as set forth in claim 5,
characterized in that
said servo member (31) is activated directly or indirectly via the charging pressure of a charging pump (26) (valve 28).
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8. The centrifuge as set forth in claim 1,
characterized in that
said elements (24, 25) serving to condition said drive fluid are located
30 exterior to said rotating system.

9. The centrifuge as set forth in claim 5,
characterized in that
said charging pump (26) like said feed pump is arranged corotating.